PATENT CLAIMS

1. An electric motor for a drive of a vehicle, having a rotor and having a stator (1) which is formed from a laminated core (2) and is provided with grooves (3) in which at least one winding (3a) is arranged, cooling air flowing through the electric motor, characterized in that the winding (3a) is formed from round wires (7) which are provided with an insulation (12), and the winding heads (4) are embedded in a temperature-resistant elastic material (4a) in order to protect them against external influences, with the result that the electric motor satisfies at least the requirements of thermal class 200.

2. The electric motor as claimed in claim 1, characterized in that the temperature-resistant elastic material (4a) is a silicone rubber.

3. The electric motor as claimed in claim 2, characterized in that the cooling air flows around the winding heads (4) which are protected by the material (4a).

4. The electric motor as claimed in one of claims 1 to 3, characterized in that the cooling air flows through cooling bores (6) provided in the stator (1).

5. The electric motor as claimed in one of claims 1 to 4, characterized in that the cooling air flows through the electric motor between the motor housing and the stator (1), which are connected to one another by means of webs.

6. The electric motor as claimed in one of claims 1 to 5, characterized in that the grooves (3) have a groove side insulation (11) formed from a material containing mica.

7. The electric motor as claimed in one of claims 1 to 6, characterized in that the insulation (12) of the round wires (7) is composed of one or more high-temperature thermoplasts which are applied by extrusion.

8. The electric motor as claimed in one of claims 1 to 6, characterized in that the insulation (12) of the round wires (7) is composed of one or more layers of polyimide film.

9. A drive, in particular for vehicles, having an electric motor through which cooling air flows and which comprises a rotor and a stator (1) which is formed from a laminated core (2) and is provided with grooves (3) in which at least one winding (3a) is arranged, characterized in that the winding (3a) is formed from round wires (7) which are provided with an insulation (12), and the winding heads (4) are embedded in a temperature-resistant elastic material (4a) in order to protect them against external influences, with the result that the electric motor satisfies at least the requirements of thermal class 200.